AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended) A method of operation within a data processing system, the method comprising:

before receiving a request to execute a statement that requires computation of a first function, ~~registering an association between~~ associating the first function ~~and~~ with a second function that returns a data type ~~information~~ descriptor for the first function;

receiving a request to execute the statement that requires computation of the first function to return data from a source; and

in response to receiving the request to execute the statement~~first function~~, performing the steps of:

executing the second function to obtain the data type ~~information~~ descriptor that ~~specifies~~ identifies one or more data types of result data that should be returned for the first function;

registering the one or more data types with a data processing system ~~information~~;

compiling the statement based on the registered one or more data types;

executing the first function to obtain the result data;

storing the result data obtained from the source in a format that reflects the registered one or more data types ~~information from the second function~~; and

returning the result data as data ~~having~~ in the format of the registered one or more data types,

wherein the method is performed by one or more computing devices.

2-3.   (Canceled)

4.   (Previously Presented) The method of claim 1 further comprising determining that the

        source is associated with the request by determining whether a certain keyword is

        specified as a data return type for the first function.

5.   (Previously Presented) The method of claim 1 further comprising determining that the

        source is associated with the request by determining whether the first function returns

        data in an array of data elements.

6-8.   (Canceled)

9.   (Currently Amended) The method of claim 1 wherein the data type ~~information~~

        <u>descriptor</u> indicates an arrangement of rows and columns of a database table and wherein

        storing the result data obtained from the source in a format that reflects the <u>registered one</u>

        <u>or more </u>data type<u>s</u> ~~information~~ comprises tabulating the result data according to the

        arrangement of rows and columns.

10-15. (Canceled)

16.   (Currently Amended) A system comprising:

        a processing entity; and

        a memory coupled to the processing entity and having program code stored therein which,

                when executed by the processing entity, causes the processing entity to:

        before receiving a request to execute <u>a statement that requires computation of </u>a first

                function, ~~register an association between~~ <u>associate </u>the first function ~~and~~ <u>with </u>a

                second function that returns <u>a </u>data type ~~information~~ <u>descriptor </u>for the first

                function;

        receive a request to execute <u>the statement that requires computation of </u>the first function

                included in the program code to return data from a source; and

        in response to receiving the request to execute the <u>statement</u>~~first function~~, performing the

                steps of:

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executing the second function to obtain the data type ~~information~~ descriptor that

~~specifies~~ identifies one or more data types of result data that should be

returned for the first function;

registering the one or more data types ~~information~~ with a data processing system;

compiling the statement based on the registered one or more data types;

executing the first function to the obtain result data,

storing the result data obtained from the source in a format that reflects the

registered one or more data types ~~information from the second function~~;

and

returning the result data as data ~~having~~ in the format of the registered one or more

data types.

17-21.   (Canceled)

22.   (Currently Amended) A computer-readable storage medium carrying one or more

sequences of instructions which, when executed by one or more processors, causes the

one or more processors to:

before receiving a request to execute a statement that requires computation of a first

function, ~~register an association between~~ associate the first function ~~and~~ with a

second function that returns a data type ~~information~~ descriptor for the first

function;

receive a request to execute the statement that requires computation of the first function

to return data from a source; and

in response to receiving the request to execute the statement~~first function~~, performing the

steps of:

executing the second function to obtain the data type ~~information~~ descriptor that

~~specifies~~ identifies one or more data types of result data that should be

returned for the first function;

registering the one or more data types ~~information~~ with a data processing system;

compiling the statement based on the registered one or more data types;

executing the first function to obtain the result data,

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storing the result data obtained from the source in a format that reflects the

registered one or more data types ~~information from the second function~~;

and

returning the result data as data ~~having~~ in the format of the registered one or more

data types.

23-24.   (Canceled)

25.   (Currently Amended) The method of claim 1 wherein the registered one or more data

types ~~information~~ is used to type-check the first function.

26.   (Previously Presented) The computer readable storage medium of claim 22 further

comprising determining that the source is associated with the request by determining

whether a certain keyword is specified as a data return type for the first function.

27.   (Previously Presented) The computer readable storage medium of claim 22 further

comprising determining that the source is associated with the request by determining

whether the first function returns data in an array of data elements.

28.   (Currently Amended) The computer readable storage medium of claim 22 wherein the

data type ~~information~~ descriptor indicates an arrangement of rows and columns of a

database table and wherein storing the result data obtained from the source in a format

that reflects the registered one or more data types ~~information~~ comprises tabulating the

result data according to the arrangement of rows and columns.

29.   (Canceled)

30.   (Currently Amended) The computer readable storage medium of claim 22 wherein the

registered one or more data types ~~information~~ is used to type-check the first function.

31-34.   (Canceled)

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35.   (Previously Presented) The system of claim 16 further comprising determining that the

        source is associated with the request by determining whether a certain keyword is

        specified as a data return type for the first function.

36.   (Previously Presented) The system of claim 16 further comprising determining that the

        source is associated with the request by determining whether the first function returns

        data in an array of data elements.

37.   (Currently Amended) The system of claim 16 wherein the data type ~~information~~

        descriptor indicates an arrangement of rows and columns of a database table and wherein

        storing the result data obtained from the source in a format that reflects the registered one

        or more data type~~s~~ ~~information~~ comprises tabulating the result data according to the

        arrangement of rows and columns.

38.   (Currently Amended) The system of claim 16 wherein the registered one or more data

        type~~s~~ ~~information~~ is used to type-check the first function.

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